IN THE CLAIMS:

Please CANCEL claims 3, 5-8 and 10-12, without prejudice or disclaimer.

Please AMEND the claims and ADD a new claim as follows:

1. (CURRENTLY AMENDED) A method of providing a multi-wavelength light source, comprising:

modulating an optical pulse source so as to output optical pulses with a designated repetition frequency f_o;

time-division multiplexing the optical pulses output by said optical pulse source by causing the outputted optical pulses to be branched by a half mirror into first and second lights, so that the branched first light is reflected by a variable optical delay unit and then the reflected first light passes through the half mirror to an output port, and so that the branched second light passes through a variable optical attenuator is then reflected by a mirror and then the reflected second light again passes through the variable optical attenuator and thereafter passes through the half mirror to the output port, ~~branching the optical pulses output by said optical pulse source to N paths and multiplexing the branched optical pulses so as to~~to thereby multiplex together the first light passing through the half mirror and the second light passing through the half mirror into a multiplexed light which is output through the output port and which includes ~~output~~ optical pulses with a repetition frequency of $2*(f_o)$, whereinwhich is an integral multiple of said designated repetition frequency f_o, wherein

a time difference ~~among the respective~~ of a path traveled by the first light and a path travelled by the second ~~paths~~ light is $1/(2*(f_o))$, ~~$1/(N*(f_o))$,~~ and ~~so that~~

the variable optical attenuator adjusts intensity of the second light so that intensities ~~and polarization states~~ of optical pulses in the branched first and second lights ~~optical pulses~~ are equal in the~~after being~~ multiplexed light output through the output port; and

demultiplexing wavelengths of ~~the~~ optical pulses in the multiplexed light output through the output port to thereby output lights~~with the repetition frequency which is the integral multiple of said designated repetition frequency so as to output said wavelengths~~ as the multi-wavelength light source.

2. (CURRENTLY AMENDED) An apparatus for providing a multi-wavelength light source, comprising:

an optical pulse source which is modulated so as to output optical pulses with a designated repetition frequency f_o;

a time-division multiplexing unit which ~~branches the optical pulses output by~~ causes the

outputted optical pulses to be branched by a half mirror into first and second lights, so that the branched first light is reflected by a variable optical delay unit and then the reflected first light passes through the half mirror to an output port, and so that the branched second light passes through a variable optical attenuator is then reflected by a mirror and then the reflected second light again passes through the variable optical attenuator and thereafter passes through the half mirror to the output port, to thereby multiplex together the first light passing through the half mirror and the second light passing through the half mirror into a multiplexed light which is output through the output port and which includes ~~said optical pulse source to N paths and multiplexes the branched optical pulses so as to output~~ optical pulses with a repetition frequency ~~which is an integral multiple of said designated repetition frequency~~of $2*f_o$, wherein a time difference of a path traveled by the first light and a path travelled by the second light is $1/(2*(f_o))$, and~~among the respective paths is $1/(N*(f_o))$, and~~ the variable optical attenuator adjusts intensity of the second light so that intensities ~~and polarization states~~ of optical pulses in the branched first and second lights~~optical pulses~~ are equal in the~~after being~~ multiplexed light output through the output port; and

a wavelength demultiplexing unit which demultiplexes wavelengths of ~~the~~ optical pulses in the multiplexed light output through the output port to thereby output lights ~~with the repetition frequency which is the integral multiple of said designated repetition frequency so as to output said wavelengths~~ as the multi-wavelength light source.

3. (CANCELED)

4. (ORIGINAL) The apparatus for providing a multi-wavelength light source as claimed in claim 2, wherein said time-division multiplexing unit is a Michelson-interferometer-type time-division multiplexing apparatus.

5. (CANCELED)
6. (CANCELED)
7. (CANCELED)
8. (CANCELED)

9. (CURRENTLY AMENDED) The apparatus for providing a multi-wavelength light source as claimed in claim 2, further comprising a spectrum-broadening unit which broadens spectrum of the optical pulses ~~which are~~ received at said time-division multiplexing unit, said spreading effected by a non-linear medium having a third-order non-linear effect.

10. (CANCELED)

11. (CANCELED)

12. (CANCELED)

13. (NEW) An apparatus comprising:

means for modulating an optical pulse source so as to output optical pulses with a designated repetition frequency f_o;

means for time-division multiplexing the optical pulses output by said optical pulse source by causing the outputted optical pulses to be branched by a half mirror into first and second lights, so that the branched first light is reflected by a variable optical delay unit and then the reflected first light passes through the half mirror to an output port, and so that the branched second light passes through a variable optical attenuator is then reflected by a mirror and then the reflected second light again passed through the variable optical attenuator and thereafter pass through the half mirror to the output port, to thereby multiplex together the first light passing through the half mirror and the second light passing through the half mirror into a multiplexed light which is output through the output port and which includes optical pulses with a repetition frequency of $2*(f_o)$, wherein

a time difference of a path traveled by the first light and a path travelled by the second light is $1/(2*(f_o))$, and

the variable optical attenuator adjusts intensity of the second light so that intensities of optical pulses in the branched first and second lights are equal in the multiplexed light output through the output port; and

means for demultiplexing wavelengths of optical pulses in the multiplexed light output through the output port to thereby output lights as the multi-wavelength light source.